31. Another example is the market for payphones. The incumbent local carriers have systematically denied independent payphone vendors the same facilities and interconnections used by their own payphones. The failure of the local carriers to cooperate with their downstream rivals in the payphone market is costly to the payphone user. As an example of non-cooperation, the local carriers consistently refuse to provide the same services to independents that they provide to their own payphone operations.

32. Cellular telephone systems, which depend on local telephone companies to deliver calls placed by cellular users to people with standard telephones, are a special instance where competition has not undermined cooperation because of special features of this service. In many markets, the local telephone company owns one of the cellular carriers, so that the issue of competition and cooperation should arise in principle. I believe that the tension between cooperation and competition is much less acute in cellular services than in local toll or long distance. Each of the two competitors is constrained to half of the spectrum capacity. It only makes sense for the local phone company to interfere with its cellular rival if its own cellular arm can serve additional customers taken from the rival. If its own cellular arm is at capacity, the incentive is diminished. Moreover, there were cellular interconnection disputes when the service commenced. Non-wireline carriers sought access to local exchange networks on a carrier-to-carrier basis while the local carriers refused and offered instead to interconnect cellular carriers as if they were just large customers.[1]

33. The state regulatory commissions and the FCC are responsible for enforcing cooperation between independent firms in the telephone network. As these regulators have permitted entry into new layers of the network—local transport, local access, payphones, voicemail, and wireless—this role of enforcing cooperation contrary to the interests of the local carriers' shareholders has become more complicated and more important. The regulators have not been

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[1] These points are developed by Dan Kelley in his declaration filed before the FCC. See *Attachment to Reply Comments of MCI Telecommunications Corporation Concerning Expedited Reconsideration of Section 271(e)(4)*, In the Matter of Implementation of the Non-Accounting Safeguards of Sections 271 and 272 of the Communications Act of 1934, as amended, CC Docket No. 96-149, April 24, 1997.

completely unsuccessful in enforcing cooperation. For example, regulators in a number of states overcame the fierce opposition of the local carriers and obtained dialing parity for those carriers' rivals. But the regulators face an uphill battle—it took huge efforts to get dialing parity and it is still unavailable in many important markets. All of these failures of cooperation occurred despite the existence of regulation that intends, broadly, to compel cooperation.

34. These failures of cooperation in spite of regulation translate into significant foregone consumer welfare. A leading example is that lack of dialing parity has severely limited competition in local toll markets, so the local carriers have been able to slow the arrival of competition and to maintain high prices in these markets.

C. Actual and Potential Competition in Local Markets

35. The Act requires that local telephone companies cooperate in opening local telephone markets to competition before they are to allowed to enter the long-distance business. In effect, the Act offers the profits from selling long-distance service as an incentive to open local markets to competition. The Act promotes three forms of local competition: (1) reselling of local service (at retail rates less avoided marketing costs), (2) leasing (at economic cost) of circuits, switches and other elements, such as access to data bases, directory assistance, operator services, white pages, ordering systems, and, (3) the building of independent facilities, that is, circuits and switches owned by independent carriers.

36. None of these forms of competition is present to any significant extent in any significant local market. (1) Reselling is occurring in a few experiments; probably the highest volume is AT&T's program in Connecticut. (2) As yet, only a trivial amount of local service based on leasing of Bell circuits and switches has occurred. One reason is that the terms of the leases have only just been set by regulators or have not been set at all. Where there are opportunities in principle for leasing of network elements, independent carriers are frustrated by the Bells' failure to cooperate in providing the elements, by high initial (non-recurring) costs, and by excessive rates for some elements. (3) Few independent firms are providing their own wire connections to homes or small businesses. Hopes that

cable companies or electric utilities might provide rival connections have proven unrealistic.

1. Reselling

37. Local competition based on the reselling of Bell services has the least potential benefit for customers of the three forms of competition promoted by the Act. The Act sets the price of resold local service at the local phone company's retail price less avoided marketing costs. All distortions built into current retail prices are inherited by the reseller's cost and therefore are embodied in the reseller's price. Consumers enjoy no benefits of lower costs save to the degree that the reseller's retailing costs are below the retailing costs avoided by the local phone company.

2. Leasing of Circuits and Switches

38. In principle, the second form of local competition promoted by the Act—the leasing of the incumbent's circuits and switches to local rivals—promises greater benefits. The Act sets the price for leased facilities at a rate based on cost. Unlike the pricing of resold services, this form of pricing allows local rivals to overcome existing distortions, provided that facilities are truly available at economic cost. In practice, however, it appears that the prospects for competition based on leased facilities are poor. Most state commissions have established only interim terms for wholesale transactions in local network components. No significant investment and irreversible commitment to competing with incumbent local carriers could occur without strong assurances that leased facilities will be available on known terms close to economic costs for the indefinite future. In addition, the systems required to provide rivals with fluid use of these elements, such as ordering systems, have not been put in place yet.

39. The conflict between competition and cooperation arises acutely when a rival competes with a local carrier by leasing facilities. Based on past conduct of telephone companies—acting strictly in their shareholders' interests—the actual experience of trying to compete with the incumbent by using its facilities is likely to be excruciatingly frustrating to those who attempt it. Local carriers' proven ability to delay or avoid regulatory intervention is sure to limit the benefits that consumers actually derive from this form of competition. For competition to

develop and flourish, rivals need to be able to use the pieces of the existing network as easily as the incumbent, and to pay no more than economic cost. This is an ambitious goal for regulation.

40. Policies to promote local competition through the leasing of facilities need to go far beyond the creation of the theoretical possibility that a rival can lease facilities from the historical phone company. Lease transactions need to be speedy and standardized, with minimum transactions costs, in order for rivalry based on leased facilities to provide serious competition in local markets.

41. Moreover, the Bells have shown their ability to inhibit the benefits seemingly promised by the Act. The result is at least a long delay in providing an environment where local rivals can rely on the availability for the long run of leased facilities at known and reasonable prices. The process of opening competition through fair pricing of existing facilities is thoroughly bogged down in rent seeking. The local phone companies will continue to create legal and other obstacles so long as their tactics succeed in preserving the status quo. Moreover, if the inhibiting effect of the local carriers' impending applications for the right to sell long-distance is allowed to run out, it is reasonable to expect even more intense warfare against local rivals hoping to lease facilities.

3. Building of Independently Owned Circuits and Switches

42. The third form of competition envisioned by the Act, the building of independent circuits and switches, is at once the form of competition that should give regulators the greatest degree of comfort for allowing the local phone companies into long distance, and at the same time the least likely standard to be achieved. This is brought home by the recent standard for competition recommended by the Department of Justice—that there be significant irreversible developments in local telephone service to demonstrate that there is a credible commitment on the part of local rivals to remain in the local telephone business. If rival local carriers are merely renting or leasing circuits and switches from the Bell, or even less permanently, reselling local service, their role may not reach the standard of irreversibility. If the prices for these unbundled network elements and resold service were raised by the local carrier, the rivals could easily and costlessly exit.

43. The economics of local circuits and other elements is critical to the potential success of a policy of replacing local regulation with competition. Long-distance carriers and local rivals lacking their own complete local loops are dependent on the facilities of the incumbent local firm—today, almost always the historical regulated monopoly local carrier. The monopoly power lies in their ownership of the single loop that connects the typical customer to the telephone system. The single loop is extremely likely to remain the *only* loop, both because it is one of the most expensive network elements and because the loop plant possesses such great economies of scale that no rival would find it economical to attempt to duplicate it.

44. The scale economy of the historical phone company's extant local loop plant inhibits entry into the market for local telephone service. Because the extant plant is universal, the cost of adding another phone to it will almost always be lower than adding another loop to the rival's incomplete loop plant. A potential rival, knowing that it could always be underpriced by the incumbent phone company because the incumbent enjoys lower costs, is unlikely to choose to be a rival at all, unless it can have a high degree of assurance that loops will be readily available from the incumbent on reasonable terms. If the historical phone company is pricing its local service at its own cost, no rival could hope to profit from entering with its own loops, either in the short run or long run. If the historical phone company is pricing its service above cost, the rival's entry is still deterred by its anticipation that the incumbent will underprice it after entry.

45. Thus, the type of unrecoverable investment that would give regulators the greatest assurance that local competition has taken hold permanently is unlikely to be available for the majority of local telephone subscribers. Earlier claims that significant fractions of telephone customers could bypass the existing local network have proven groundless—wireless access suffers both cost and quality disadvantages, and hopes that cable television vendors would add telephone capabilities to their systems have proven unrealistic. As a result, the historical local carriers remain and are likely to remain the sole owners of facilities for access at reasonable cost to the overwhelming majority of telephone customers.

46. In my opinion, the Department of Justice has recommended the appropriate economic standard for determining when it is safe for a local carrier to assume control of a long-distance affiliate—when the local market is irreversibly open to

competition. That standard will only be met when local competition has advanced to the point that local service rivals have committed significant unrecoverable investments and competition is at a level where the market is essentially self-regulating. At that point, the historical local carrier's market share will have begun to decline substantially in all local markets thanks to the entry of numerous rivals; barriers to entry of all types, regulatory and otherwise, will have been permanently removed; prices will be converging toward levels determined by cost; and the pace of innovation and the introduction of new services will have accelerated.

D. Is there Enough Local Competition to Relinquish Bell Cooperation with the Independent Long-distance Carriers?

47. The state of local competition is critical to long-distance policy, because long-distance carriers rely on local carriers to provide access at both ends of the typical long-distance call. Currently, independent long-distance carriers enjoy cooperative relations with local carriers, because their relations are those of buyer and seller, and not of rivals. If local carriers become rivals in long distance, they will owe a duty to their shareholders to withdraw cooperation wherever possible. Long-distance carriers and their customers would be protected if they could turn to alternative suppliers of access to escape the adverse effects of the withdrawal of cooperation. And, in that environment, local carriers, including the historical carrier, would have an incentive to remain cooperative.

48. At present, long-distance carriers and their customers rarely face alternative suppliers of access except in the case of larger businesses. As discussed earlier , none of the three modes of local competition promoted by the Act has succeeded in establishing alternative local carriers who could provide access to residential or smaller business customers. Ineffective regulation and the high cost of alternative access technologies constitute substantial barriers to entry to the access market. There is strong indirect evidence that these barriers are formidable. All observers agree that access is priced well above cost. Nonetheless, the incumbent local carriers have retained their near-monopolies. The continuation of high profit margins can be explained only by barriers to entry.

49. I conclude that for the present and near future, policy decisions about long distance in general and in particular Bell applications to enter long distance should be made on the assumption of the continuation of a single access provider for most telephone customers and with access charges regulated at levels above costs.

E. Bell Entry into Long Distance Now Would Impair Any Potential for Local Competition

50. Vertical integration of the dominant local carrier into long distance would have an important chilling effect on local telephone competition. We may safely assume that the local carrier's long-distance operations will rely upon the local carrier for access. Hence the shift of an important share of long-distance traffic from independent carriers to the local carrier's long-distance affiliate will reduce the potential business available to a new competitor in local service. Because local service has important increasing returns to scale, the reduced size of the local market will lower the incentive perceived by the potential entrant to the local market and cut the number of local competitors.

51. Access is one of the most profitable services sold by a local carrier. Regulation has been far more successful in keeping local service prices close to cost than it has been in keeping access charges close to cost. Hence the opportunity to sell access at prices somewhere between cost and the prevailing high price is one of the main economic incentives for entry to local service. In fact, the only robust form of local entry that has occurred to date—competitive access providers for large customers—relies entirely on this source of profit. Removing 20 or 30 percent of the access market by permitting a local carrier to control a long-distance subsidiary would have a significant adverse effect on the incentives for local entry.

52. In addition, integrated long-distance operations would give the dominant local carrier a potent strategic tool for depriving potential local entrants of much of their anticipated profits from the provision of access. Where the dominant local carrier is not a long-distance carrier, rival local carriers can capture access business whenever their cost is below the high level of regulated switched access charges. The dominant local carrier cannot lower the switched access charge

opportunistically to retain the access business. But when the dominant local carrier bundles access and long distance, as it would under any program of vertical integration, the carrier would have the freedom, in effect, to lower its implicit access charge so as to deter entry and retain its access customers.

53. Thus if a Bell achieves a significant share of the long-distance business of its subscribers in one of its home states, the likelihood of entry and improved competition in local service in that state will be diminished. Whereas independent long-distance carriers would cooperate enthusiastically with new local carriers, few of those new carriers would serve customers who chose the incumbent Bell as their long-distance carrier.

54. I conclude that vertical integration of the local carrier into long distance will inhibit the development of local competition by depriving potential entrants to local markets of much of the profit otherwise available from the access business.

III. Effects of Control of a Long-Distance Subsidiary by a Local Telephone Company

55. An application by an incumbent local carrier for permission to operate a long-distance subsidiary to serve its current customers raises the questions about competition and cooperation already discussed in Part II. Currently, local telephone companies cooperate with the many long-distance carriers, who are customers for access services at both ends of the great majority of long-distance calls. Cooperation is a natural outcome of the relationship between a seller—the local carrier—and a buyer—the long-distance carrier. Cooperation is threatened when the local phone company controls a long-distance subsidiary. Then the other long-distance carriers become rivals of the local carrier and cooperation is no longer in its interest.

56. After a dominant local carrier takes control of a long-distance carrier, shareholder interest will dictate that the local carrier cease any voluntary cooperation with independent long-distance carriers, who would then be the local carrier's rivals. Local competition relieves this problem, because in a sufficiently competitive local market the incumbent's long-distance affiliate would require the same types of cooperation from other local providers that rival long-distance

firms required from the incumbent. It is critical to understand that current levels of cooperation between local telephone companies and long-distance carriers are no guide to the level of cooperation that would occur after they became rivals.

57. Recent economic analysis of the incentives of a monopolist to cooperate with downstream rivals has clarified the circumstances when cooperation can be sustained and when it will be withdrawn. In the case where the downstream customers sell products that are close substitutes, it is never in the monopolist's interest to cooperate. By withdrawing cooperation and raising the costs of downstream rivals, the monopolist can always earn more profit through the enhanced sales and profits of its own downstream seller. I treat this topic more fully in Section H of this Part, where I also indicate the shortcomings of analyses that seem to reach the opposite conclusion.

58. The monopolist's incentives to withdraw cooperation from downstream rivals exist under all conditions in the upstream market, but are strongest when the price in that market is held below the monopoly price by regulation. The upstream monopolist in that case will be able to recover monopoly profits denied to it by regulation by elevating prices in the downstream market. In the telephone market, access charges are regulated by the FCC. Not only are they held below the monopoly level, but changes recently ordered by the FCC will increase the bite of regulation and lower access charges toward the level of cost. As these lower access charges go into effect, the incentive of the local telephone companies to inhibit the operations of their long-distance rivals will become greater.

59. The withdrawal of cooperation that follows from a local carrier controlling a long-distance affiliate is socially harmful. Reduced cooperation and the resulting higher long-distance costs raise long-distance prices. This conclusion follows whether or not the long-distance market is perfectly competitive.

60. In view of the high social value of cooperation, a policy permitting a local carrier to affiliate with a long-distance carrier requires a companion policy of enforcing cooperation between the newly integrated carrier and its long-distance rivals. This policy of enforcing cooperation would replace the policy of inducing cooperation through market incentives provided by the current principle of structural separation, where the long-distance carriers are only customers, not rivals, of non-integrated local carriers. In the previous Part, I considered the

evidence on the success of regulation and litigation in enforcing cooperation contrary to market incentives. At best, regulators and courts can prevent the more conspicuous forms of non-cooperation—overt acts of discrimination. Even then, remediation usually comes years after the conduct begins. I believe that the evidence is generally unfavorable to the hypothesis that genuine cooperation of the type needed increasingly between the elements of the telephone network can be enforced from the outside.

61. The dangers of non-cooperation become greater as time passes. At first, any departure from earlier relations between a local carrier and its independent long-distance customers would be conspicuous. As time passes, the comparison with the cooperation that occurred automatically under structural separation would be less instructive. Continuing technical change and changes in market conditions will diminish the usefulness of a comparison to the earlier situation with high levels of cooperation.

62. Regulation of access services in most markets will continue because the current local carriers will remain dominant in these access markets for the foreseeable future. As I noted earlier, cooperation with downstream rivals is particularly unlikely if the upstream market is regulated. In addition, vertical integration raises the burden on the regulator by creating opportunities for cost shifting. Determining the appropriate allocation of costs between the regulated and competitive activities of the same telephone company is expensive and unreliable. Under any but the most pristine price cap, regulation creates an incentive to report costs of unregulated operations as if they arose from regulated operations. The incentive is direct in traditional regulation, where a firm is compensated for its allowable costs. The incentive is indirect but still important in price-cap regulation, to the extent that future price caps depend on current costs or profits. The shifting of costs from unregulated to regulated activities lowers social welfare in two ways: It raises the price of regulated service and it displaces more efficient rivals from the unregulated market. Section I of this Part deals with these issues.

63. The policy of structural separation is best applied when efficiencies from vertical integration are small relative to the costs of non-cooperation. In Section C of this Part, I consider evidence on these efficiencies, with particular attention to those identified in the studies sponsored by the Bells. I do not find persuasive evidence of efficiencies from combining long distance with access and other types of local service.

A. Benefits of Cooperation in the Telephone Network

64. Long distance involves substantial cooperation between the carrier and access providers at both ends of the call. As networks become more sophisticated, cooperation will become more critical. In that respect, the benefits from the principle of structural separation are growing over time.

65. The conversion of the national telephone system from MF signaling to SS7 signaling has dramatically increased the benefits that the telephone customer can obtain from the system if the various suppliers in the system cooperate. The advent of the Advanced Intelligent Network and the use of ever more sophisticated software will increase the potential benefits even further.

66. As the national telephone system becomes more sophisticated, the importance of cooperation becomes greater but cooperation becomes more subtle and difficult to enforce through regulation and litigation. Experience in the downstream markets where the incumbent local carriers are already vertically integrated—local toll, voicemail, and payphones—suggests uniformly that the carriers serve their shareholders by cooperating as little as possible. Unless the efficiencies of vertical integration are substantial, the customers' interests are better served by the principle of structural separation. Under that principle, the carriers have incentives to cooperate with their downstream customers.

67. Structural separation requires separate ownership of the dominant local carrier and long-distance carriers—its purposes cannot be accomplished simply by placing the local carrier's long-distance operation in a separate subsidiary, as required by Section 272 of the Telecommunications Act. The requirement for a separate long-distance subsidiary in the Telecommunications Act of 1996 applies even after sufficient local competition has developed to allow the removal of structural separation. The requirement for a separate subsidiary has benefits for regulation, but does not affect incentives that inhibit cooperation after vertical integration

B. Can Regulators Force Cooperation?

68. Earlier, in Part II, I considered a number of examples of the low level of cooperation between vertically integrated telephone companies and their rivals in downstream markets. All of these instances of non-cooperation occurred despite regulation. As a general matter, I believe it is a fair summary of the

evidence from experience in the telephone industry that regulators have not been successful in enforcing high levels of cooperation in situations where the shareholder interests of the local carriers have been to avoid cooperating with downstream rivals. The previous Part showed that competition in the upstream access market has not increased enough to reduce appreciably the need for cooperation between the local carriers and long-distance carriers.

69. In my opinion, it would be unrealistic to expect enforcement and regulation to deal effectively with the major new problems that control of long-distance subsidiaries by local telephone companies would bring. Regulation and enforcement have failed to deal effectively with the most elementary instances of non-cooperation in areas such as local toll service and payphones. I believe that it would be unwise to rely on the same institutions to deal with the more significant social losses that would occur upon vertical integration into the long-distance market. Again, existing high levels of cooperation between local and long-distance carriers are no guide to the level of cooperation that would occur after local carriers take control of long-distance sellers.

C. Do Efficiencies Outweigh the Loss of Cooperation When a Local Monopoly Controls a Long-Distance Subsidiary?

70. Despite the social costs of reduced cooperation and the regulatory burden of enforcing cooperation to replace market incentives, it could be desirable to permit local phone companies to control long-distance subsidiaries if there were sufficiently important efficiencies from that control. The issue is *not* whether there are *any* efficiencies. Rather, it is whether the efficiencies are quantitatively sufficient to overcome the sum of the social costs of the decline in cooperation that will accompany vertical integration and the costs of enforcing whatever level of cooperation can be achieved by regulation and litigation.

71. The appropriate measure of efficiency benefits is based on the comparison of full control by the local phone company of a long-distance subsidiary to the most efficient vertical relationship based on contracts that preserve incentives to cooperate. The benefits of vertical integration are limited to those that cannot be achieved through contracts. A leading example is billing. Customers' preference for single telephone bills combining local and long-distance charges are not a source of efficiency, as past experience has shown that the local phone company

can provide this service under contract without controlling any long-distance carrier.

72. Ordinarily, the decision to vertically integrate can be left to a private firm in competitive markets. However, it is a fundamental conclusion of my analysis that the decision about vertical integration into long distance cannot be left to the local carrier, so long as the local carrier is a regulated firm with potential market power. Although efficiencies of vertical integration might be one force that led a local carrier to integrate into long distance, there is a powerful incentive, harmful to consumers, that exists even without any efficiencies. The result of leaving decisions about vertical integration to local carriers is anything but the efficient determination of vertical integration that would occur if local markets were reasonably competitive.

1. One-Stop Shopping

73. Many discussions of the potential benefits of permitting local telephone companies to control long-distance subsidiaries put primary emphasis on the concept of one-stop shopping. These discussions hypothesize that consumers would rather make a single decision about all types of telephone service rather than dealing separately with local, long-distance, and cellular carriers, and Internet access providers. In particular, the customer seeks a single bill for these services. Where one service is dependent on another, as long distance is dependent on local service for access, integration of customer service operations avoids the problem of finger-pointing. These are the only sources of efficiency benefits from one-stop shopping of which I am aware. Moreover, these efficiencies are limited by the requirement that the long-distance arm be a separate subsidiary.

74. Evidence on the magnitude of one-stop shopping efficiencies is meager. With respect to marketing costs, local carriers do not currently incur such costs for the bulk of their basic services, because their residential and small business customers have no alternative to the single local carrier. Local carriers only market special services, such as call waiting and voicemail. The only marketing efficiencies arise from the opportunity to promote long distance along with those special services.

75. Efficiencies of joint marketing of telephone products can be captured through contracts in place of full joint control. There does not appear to be any benefit

associated uniquely with the local carrier's control of a long-distance subsidiary in the area of marketing efficiencies. Contracts are widely used already in the telephone industry—as in almost every industry. For example, local carriers have been billing customers for the long-distance services provided by unaffiliated carriers.

76. With respect to customer service efficiencies, it would be useful to know, for example, what fraction of customer service calls to long-distance carriers result in referrals to the local carrier (in which case the *possibility* of finger-pointing arises) and what fraction deal with issues such as billing errors, rate plans, and other issues where there cannot possibly be any finger-pointing.

77. Almost the only evidence available about the effects of one-stop shopping is indirect. Southern New England Telephone's long-distance affiliate has enrolled about a third of Connecticut's long-distance customers.[2] SNET's long-distance prices are among the highest of those offering services to households. Those selecting SNET as their long-distance carrier typically have much smaller bills than the average—SNET's share of Connecticut long-distance revenue is considerably lower than its share of customers. But SNET's ability to capture a third of the long-distance market does not reveal anything about the magnitude of the benefit that consumers have achieved from bundled service. First, some of SNET's success has been achieved at the same time that earlier cooperation broke down—AT&T no longer offers its Connecticut customers the convenience of billing by SNET, for example. Second, in a competitive market, small changes in cost or product quality can result in large changes in market share.

78. Bundling of regulated and unregulated services makes the assignment of costs almost impossible. The resulting problems become more severe as time passes. To prevent the local carrier from monopolizing the long-distance market, the local carrier must be forced to offer unbundled local service at a regulated price. At first, this unbundled price can be administered as a price cap. As time passes, however, regulators would need to refer to actual cost to update the price cap. At that time, the untangling of costs of local service would be more difficult than ever if much of it was sold bundled with long distance. The result would almost certainly be an overstatement of local service cost, an unwarranted increase in the unbundled price of local service, and corresponding increases in

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[2] "A Telecom Yankee Defends Its Turf," *Business Week*, October 28, 1996, p. 167.

long-distance prices. Where customers must buy their local service from the historical phone company, they will choose between the bundled price offered by the local carrier and the sum of the unbundled local price plus the price charged by an independent long-distance carrier. As a result, setting a high unbundled price for local service permits the local carrier to set a high bundled price that cannot be competed down by independent long-distance carriers.

2. Efficiencies in Marketing to Low-Volume Long-Distance Customers

79. The Bells have frequently argued that they have a comparative advantage in marketing to low-volume users of long distance.[3] In principle, this efficiency could arise independently of one-stop shopping. Specialists from the local phone company could market the unbundled services of a long-distance affiliate, applying expertise learned from local experience. Recognition of the local carrier's brand name is a factor identified by some commentators. However, these efficiencies will not be fully attainable as long as a separate subsidiary for long distance is required.

3. Artificial Efficiency from the Act's Provisions on Local Toll

80. An unfortunate provision of the Telecommunications Act results in a completely artificial efficiency associated with permitting a local carrier to control a long-distance subsidiary. When that permission is given, but not before, regulators may compel the local carrier to offer presubscription with dialing parity to independent local toll carriers. It is a telling example of the adverse effect of vertical integration on cooperation that no Bell has chosen voluntarily to allow its customers to presubscribe to rival local toll carriers. Where service is not presubscribed, the competitive service is very inconvenient, although it is usually considerably cheaper than the incumbent Bell's service. The appropriate policy today is to grant immediate presubscription and dialing parity in those states where this move was delayed by the Act. Unfortunately, this would require an amendment to the Act.

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[3] *See, e.g., Affidavit of Alfred E. Kahn and Timothy J. Tardiff on Behalf of SBC*, filed in CC Docket No. 97-121, ¶ 27, April 14, 1997.

4. Conclusions on Efficiencies from Control of a Long-Distance Subsidiary

81. I find no significant evidence that there are important efficiencies from a local carrier's control of a long-distance subsidiary. The conclusion that there were no important efficiencies was an important part of the logic of the splitting of the old Bell system into the local carriers and AT&T. There is no basis to conclude that the situation has changed.

D. Why a Separate Long-Distance Subsidiary?

82. The Act requires that the long-distance affiliate controlled by the local carrier be organized as a separate subsidiary. I believe that the effects of this requirement are generally agreed by economists to be as follows: (1) The segregation of cost information may have some value in preventing cost shifting, where costs of the unregulated long-distance operation are mis-reported as arising from regulated local operations, although such measures have not proved effective in the past. (2) It is unrealistic to expect that a parent will fail to consider its wholly-owned subsidiary's interests. In particular, the local carrier will consider the benefits that its long-distance subsidiary will receive if it withdraws cooperation from the subsidiary's rivals. (3) It is equally unrealistic to expect that a wholly-owned subsidiary will act other than in accord with its owner's interests. The long-distance affiliate of a local carrier will consider the effects of its actions on the consolidated profits of the integrated entity. Thus, the long-distance affiliate will consider the lost access profits of its parent when it takes business away from a rival. Even if the affiliate pays its parents the regulated access charge for the calls it carries, the affiliate will act as if its cost were actual access cost plus the opportunity cost associated with the lost access profit.

E. The Likely Role of the Bells in Long Distance: Evidence from Local Toll Markets

83. Recently, telephone policy has overcome the Bells' stiff resistance to competition in local (intraLATA) toll markets in some of their territories. To the consumer's benefit, these Bells face competition from the four major long-distance carriers and from a number of smaller carriers in local toll markets. Though their experts create the impression that the companies would bid the price down in the long-distance market and reduce price differences between

large and small users, nothing in Bell pricing in local toll markets to date supports the proposition that they will be low-price sellers.

84. For example, BellSouth's customers in South Carolina pay a flat rate of 33 cents per minute for local toll calls. A discount of 30 percent lowers this to 23.2 cents per minute for bills over $10 per month. By contrast, AT&T's basic rate is 26 cents per minute and its One Rate Plus is 10 cents. The MCI One price is 12 cents per minute. BellSouth is plainly at the very top in pricing. Ameritech's Michigan customers pay a flat rate of 15 cents per minute for local toll calls. For higher volume customers, Ameritech offers Call Pack 20 service that lowers the price of local toll calls to 12 cents per minute but has a minimum spending level of $5 per month (one hour of call time) specifically for local toll calls. Again, much better rates are available from other carriers.

85. As these rates show, the Bells such as BellSouth and Ameritech are high-price sellers in the local toll market. MCI, Sprint, and WorldCom all provide local rates comparable to their long-distance rates of 10 to 15 cents per minute.

86. Based on this evidence, it appears likely that the Bells would be at the upper end of the price distribution were they to offer long-distance service. Unlike the more aggressive long-distance carriers, the Bells would rely on methods other than the offering of low prices to attract customers.

87. Later, in section F of Part IV, I discuss the evidence that pricing patterns for toll calls reflect cost differences between low and high-volume customers and are not an artifact of market power. Based on the Bells' pricing plans in their local toll markets, there is every reason to expect that the Bells would adopt pricing plans that reflect the lower costs of serving higher-volume customers by promoting low-price plans selectively to these customers.

88. Both Ameritech's behavior in local toll markets and SNET's behavior regarding local tolls after it began to sell long-distance services (reviewed in the following section), tell the same story: When incumbent local carriers compete with independent toll carriers, the local carriers position themselves toward the top of the distribution of rates. They do not offer telephone customers choices superior to those available from the independent carriers. The opening of local toll markets to competition has been beneficial because it has brought in low-price sellers, and will be even more beneficial if determined interference by local carriers can be overcome. On the other hand, the addition of high-price local

carriers to the existing competitive long-distance market will not add to consumer welfare.

F. Lessons from Experience in Connecticut

89. The local telephone company serving Connecticut, Southern New England Telephone (SNET), began selling long-distance services in 1994. At the same time, the local toll market was opened to competition. Experience since then is helpful in understanding what happens when an upstream monopolist begins to compete in a downstream market. As yet, failure to determine wholesale rates for the local network has blocked meaningful local competition—SNET has retained a near-monopoly in providing local service including access.

90. SNET has a huge competitive advantage in the Connecticut market for interstate long-distance calls because the Telecommunications Act prohibits responses by its national rivals that apply only to Connecticut. The national long-distance carriers would have to lower their prices nationally in order to respond to SNET's pricing. SNET has done little to take advantage of this perverse feature of the law. SNET's interstate rates are 23 cents per minute during the day and 13 cents at night, with small discounts for high volumes. By contrast, the MCI One interstate rate is 12 cents per minute at all times, for calls in excess of $25 per month, and 15 cents per minute for calls less than $25 per month. The AT&T One Rate and Sprint Sense Day Plan, completely unrestricted plans with no fixed charges and no minimum purchases, cost 15 cents per minute. Lower rates are also available, including AT&T's One Rate Plus rate of 10 cents per minute. The Connecticut long-distance customer has gained no meaningful advantage from SNET's control of a long-distance subsidiary in the market.

91. SNET is also the high-price seller in the local toll market. In this respect it is no different from the other local telephone companies, such as BellSouth and Ameritech, who have placed themselves toward the top of the distribution of prices in local toll markets, as these markets have been opened to competition. If you subscribe to SNET's intraLATA service, you pay 18 cents per minute during the day and 10 cents at night and on the weekend. It is an astonishing fact that I, a part-time resident of Connecticut, pay half again as much per minute to call from New Haven to Killingworth using SNET as I pay to call to California. By contrast, AT&T's local toll rate in Connecticut is 5 cents per minute for One Rate

and One Rate Plus, MCI's is 10 cents per minute, and Sprint's is 10 cents per minute off-peak and 15 cents during peak hours.

92. SNET's responses to becoming a rival of the long-distance carriers are in line with the analysis presented earlier in this declaration. Previously, SNET was a supplier to the long-distance carriers—it enjoyed its position as the monopoly seller of access services at high prices. SNET cooperated voluntarily with the long-distance carriers. For example, SNET had a contract with AT&T to bill AT&T's customers on their local phone bills. SNET terminated this cooperation when AT&T became a rival. In addition, SNET has prevented the long-distance carriers (with the exception of SNET's long-distance supplier, Sprint) from offering presubscription for local toll. MCI's customers must remember to dial 10222 in order to take advantage of MCI's low prices for local toll calls. Although the Act prohibits regulators from compelling local toll presubscription where it did not exist in early 1996, SNET would offer it voluntarily if it were not a rival in the local toll market.

93. The main change that has occurred in Connecticut from the perspective of typical telephone customers is that some of them have lost the convenience of receiving a single phone bill for local and AT&T long-distance service. There have been no meaningful benefits in the form of reduced prices. Nothing in the experience in Connecticut supports the extension of the policy of permitting a local telephone company to enter the long-distance market while the company still dominates the access market. If substantial local competition develops in Connecticut, most of the harm associated with SNET's withdrawal of cooperation will be ameliorated.

94. BellSouth's brief in this matter (pp. 78-84) suggests that its pricing, should it be permitted to create a long-distance subsidiary, would be similar to SNET's—a bit below AT&T's standard rates but far above the much more attractive low rates available from many carriers including AT&T.

G. The Regulated Price of Access

95. A significant aspect of regulation, important for the issues surrounding a Bell application to enter long distance, is the regulated price of access. Most observers agree that access is priced well above cost, and will remain so, despite

the FCC's recent lowering of the charges.[4] The encouragement of effective local competition is the best hope in the longer run for achieving efficient access charges close to the level of economic cost. In the meantime, elevation of access charges distorts telephone markets in important ways.

96. One important inefficiency is the redundant provision of access to some business customers. It is inefficient for both the incumbent local carrier and a rival to provide access circuits to these customers if the result is underutilized circuits. To the extent that any customers are switching from wired access to wireless access, such as satellite or cellular access at stationary locations, an even greater inefficiency arises because wireless is substantially more expensive.

97. The overpricing of access would become a more acute policy issue if dominant local carriers were allowed to control long-distance subsidiaries. Because the vertically integrated carrier incurs the actual cost of access, whereas its long-distance rivals pay the substantially higher access charge, overpricing of access creates a cost advantage for the local carrier. Although the local carrier also incurs an opportunity cost if it takes long-distance business away from one of its access customers, this effect does not fully offset the cost advantage. Under efficient competition, with access priced not too far above cost, the existing long-distance carriers would sell more services at lower prices. Overpriced access means that the local carriers will capture a larger share of the long-distance market than they would capture under efficient competition.

98. Although it is true that the cost advantage of the dominant local carrier may reduce the price of long-distance service, this effect should not be considered as a benefit flowing from the carrier's entry into long distance. It is purely an artifact of the overpricing of access services. After entry, the price of long-distance service would remain higher, and the quantity sold lower, than in the efficient case with properly priced access and structural separation of local and long-distance. Moreover, the evidence from SNET's entry in Connecticut suggests that there will not be a price decline at all.

99. A local carrier has no special incentive to take long-distance business away from an independent carrier who is an access customer of the local carrier,

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[4] Federal Communications Commission, *First Report and Order in the Matter of Access Charge Reform*, May 16, 1997.

because the foregone access charge becomes an opportunity cost. But the local carrier does have a special incentive to take business away from a long-distance carrier who is using other forms of access, whenever the local carrier's actual access cost is less than the price of access set by the alternative access provider. As local competition develops, this factor may lead to more rapid expansion of the incumbent local carriers' long-distance affiliates than one would expect for an entrant lacking this artificial incentive. The corresponding effect on independent long-distance carriers would be larger—more of them would be driven out of the market or would fail to enter.

100. An important implication of this analysis is that the substantial share of the long-distance market achieved by local carriers, such as SNET, who have recently begun to control long-distance subsidiaries, is no indication of efficiencies or other fundamental sources of consumer benefits. The likelihood that a Bell will achieve 20 or 25 percent of the long-distance market should it be allowed to control a carrier in that market is no indicator of social benefits.

H. Formal Analysis of Vertical Integration and Cooperation

101. As I have stressed earlier, a Bell's application for permission to control a long-distance subsidiary raises issues about vertical integration that arise in many contexts. A number of economists have studied the question of whether a monopoly seller of access has an incentive to cooperate with its rivals in the downstream long-distance market. A simple framework is the following: Would an access supplier voluntarily pass on cost-reducing information that would benefit its rivals in the long-distance market? That is, would providing the information raise the profit of the vertically integrated access supplier? A fair reading of this literature is that the answer is unambiguously no. *No author has found circumstances where rational conduct by the access supplier would cause it to help its downstream rivals.* Formal economic analysis speaks with one voice that, once the access supplier competes in the downstream long-distance market, it will try to interfere with its rivals in that market. It would lower, not raise, its profit, if it cooperated voluntarily. This conclusion follows whether or not the access price is regulated, whether or not the regulated access price is at or above cost, and whether or not the access supplier sells long distance through a separate subsidiary that maximizes its own profit.

102. The reasoning behind the result that cooperation cannot be expected from a rival is straightforward. In every model of the interaction of firms in a market, a firm benefits by raising its rivals' costs. The result of the increased costs of rivals will be a combination of a higher market price and greater volume sold by the one seller whose costs do not rise. Both of these effects unambiguously add to that seller's profit. Placing the problem in the context of the presence of a vertically integrated access supplier in the long-distance market does not change the analysis. For example, suppose that the independent long-distance carriers behave competitively, supplying indefinitely large volumes of service if the price is at or above their cost, and nothing otherwise. Suppose further that the regulated price of access is above the cost of access but below the unregulated monopoly price. Finally, suppose that the access supplier can raise the costs of the independent long-distance carriers by withdrawing cooperation. If the supplier chooses to cooperate, its profit is limited to its regulated access margin, because competition guarantees that the price is equal to the cost of long-distance service including the regulated access charge. Thus the access supplier makes a profit on all access (including that supplied to its own subsidiary) to the extent that the regulated price of access is above cost and no long-distance supplier makes any profit. Now let the access supplier raise its rivals' costs. The access supplier can capture the entire long-distance market by pricing slightly below its rivals' cost level. It becomes a monopolist in the long-distance market. As it raises its rivals' costs further, it achieves the monopoly level of profit for the long-distance market. As long as the regulated level of the access charge does not already deliver the monopoly profit (which it surely does not, in reality), then the access supplier has an unambiguous incentive to raise the level of the price ceiling provided by the competitive long-distance industry.

103. Although my example is based on competition among the independent long-distance carriers, the same result applies if long-distance is modeled as an oligopoly, even one with much more market power and profit than suggested by the data reviewed later in this declaration. A recent paper by David Sibley and Dennis Weisman considers a standard oligopoly model, the Cournot model.[5]

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[5] David S. Sibley and Dennis L. Weisman, "Raising Rivals' Costs: The Entry of an Upstream Monopolist into Downstream Markets," Kansas State University, March 1997. An earlier paper by the same authors, "Competitive Incentives of Vertically Integrated Local Exchange Carriers," November 1995, may have created the impression that a monopolist in the access

They demonstrate that the monopoly seller of access has an unambiguous incentive to withdraw cooperation from the downstream long-distance carriers and thus to raise their costs.[6]

104. Sibley and Weisman also consider the possibility that the long-distance affiliate of the monopoly seller of access is sufficiently isolated from its parent so that the affiliate maximizes its own long-distance profits and does not consider the effects that its activities have on the upstream access business of its parent. The affiliate pays the same regulated access charge paid by the independent long-distance carriers. In this case as well, under reasonable conditions, the monopoly seller of access has an incentive to withdraw cooperation and raise the costs of the independent long-distance sellers.[7]

105. In their analysis of the isolated subsidiary, Sibley and Weisman suggest that it is possible, under certain conditions that I find quite unreasonable, that the access supplier would choose not to withdraw cooperation when its long-distance affiliate has a small share of the long-distance market. In their numerical example, a share lower than about 13 percent means that the access supplier that withdraws cooperation loses more access profit from its independent long-distance customers than it gains in profit from its long-distance subsidiary. There are three reasons why this result should not be taken seriously: (1) It is completely unrealistic and contrary to basic principles of economics to expect the managers of the long-distance affiliate to ignore the benefits that expansion of their output conveys upon the parent. The affiliate should expand to the point where the combined profit of parent and affiliate is maximal. As noted above, when the affiliate behaves in this rational way, the parent has an unambiguous incentive to withdraw cooperation. (2) The result applies only for very low market shares for the affiliate in long distance. Most projections for the market shares of major local carriers in long distance are well above 13 percent. (3) Sibley and Weisman only consider tiny increases in costs

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market may choose not to raise its rivals' costs under some circumstances, but I believe that the March 1997 paper states the authors' current beliefs about how to analyze this issue.

[6] "Raising Rivals' Costs," p. 11, Theorem R4.

[7] *Ibid.*, pp. 15 and 16.

induced by the withdrawal of cooperation.[8] The access supplier *always* has an incentive to impose larger cost increases on its long-distance rivals.

106. Sibley and Weisman suggest that there is a possibility that the access supplier will not have an incentive to withdraw cooperation during the transition period before its long-distance affiliate achieves its equilibrium market share. They consider what they call the conditional equilibrium of their model, where they arbitrarily set the sales of the affiliate below the level predicted by the model.[9] Their approach here has no grounding in the received theory of oligopoly. The model is meaningless without adding elements that explain why the long-distance affiliate is less successful than the model predicts. It is reasonable to suppose that costs of rapid expansion limit the affiliate's market share in the early years. Nicholas Economides has shown that the access seller has an incentive to withdraw cooperation even when its long-distance affiliate has a cost disadvantage.[10] Thus, Sibley and Weisman are reasonable in suggesting that it will take time for the access seller to reach its long-run equilibrium share, but they are incorrect in suggesting that the access seller will continue to cooperate with its long-distance rivals during the transition period. In a full analysis, the long-distance subsidiary would face an adjustment cost that explained why its market share did not rise immediately to its longer-run equilibrium. That is, in the period immediately after entry, the subsidiary would have the cost disadvantage considered in Economides's analysis. As he shows, the access seller would have an unambiguous incentive to withdraw cooperation from the moment its subsidiary entered the long-distance business.

107. Sibley and Weisman responded to these criticisms recently.[11] First, they propose that principal-agent theory provides a way to make a subsidiary behave in ways contrary to the interests of the parent. They suggest that this may

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[8] In technical terms, Sibley and Weisman take the derivative with respect to the cost increase at the point where the cost increase is zero. In fact, the combined profit becomes an increasing function of the cost increase for relatively small cost increases—the region where the derivative is negative is very small.

[9] *Ibid.*, pp. 9-13.

[10] "The Incentive for Non-Price Discrimination by an Input Monopolist," Stern School of Business, New York University, January 1997, revised April 1997.

[11] *Affidavit of David S. Sibley and Dennis L. Weisman on Behalf of SBC*, filed in CC Docket No. 97-121, May 17, 1997.

happen spontaneously, because the parent is unable to provide incentives that make the subsidiary behave in the parent's interest. Their discussion is purely by way of example and conjecture—they mention that managers of subsidiaries may maximize profits in order to obtain better jobs in other firms. But there is no evidence that shareholders are being deprived of value by this type of conduct in any quantitatively important way and plenty of evidence overall that firms are operated in their shareholders' interest. In any case, as I pointed out above, even when the subsidiary maximizes its own profit, two other extreme assumptions are needed to eliminate the incentive for the local phone company to withdraw cooperation from its long-distance rivals: a small long-distance share and a small potential cost increase.

108. Sibley and Weisman concede that it is possible that the market share of the local phone company's long-distance affiliate may rise into the region where they find that the company has an incentive to withdraw cooperation. They suggest that the company will cooperate with its rivals until its long-distance market share reaches the critical point. Since the evidence from Connecticut suggests that the critical point will be passed quickly, this point has little importance.

109. As I discussed earlier, a proper application of the Cournot model—one that recognizes that costs of adjustment limit the new seller's market share at the outset—would show that the parent always has an incentive to withdraw cooperation from the rivals of its long-distance subsidiary. Sibley and Weisman suggest that the appropriate way to model the transition is the gradual release of a capacity constraint, in which case the model would give their result. But the idea of a capacity constraint is silly, given that the Bells plan to offer long distance by using the facilities of large established carriers. In reality, the proper model is one where the Bell faces a temporarily higher cost, but still has a fairly flat marginal cost schedule, precisely the case considered by Economides.

110. Sibley and Weisman do not even comment on my point that their focus on infinitesimal increases in rivals' costs masks the fact that the parent local carrier would always choose to impose large cost increases on its long-distance rivals. It remains my conclusion that under all reasonable assumptions, analyses of the type they have conducted agree that it is invariably in the parent's interest to withdraw cooperation from long-distance rivals.